


IDS Dated February 17, 2004  
Attorney Docket No. 1256-00947  
Applicants: Hector F. DeLuca et al

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Docket No. :	1256-00947	)	Alexandria, VA 22313-1450 on this 17th
		)	day of February, 2004. The Express Mail
<b>PARENT APPLICATION DATA:</b>		)	Label is EV383674403US.
Appln. No. :	10/352,745	)	
Filed :	January 28, 2003	)	
Title :	26,27-Homologated-	)	 February 17, 2004
	20-EPI-2-Alkylidene-	)	Dorothy A. Hauser Date
	19-Nor-Vitamin D	)	
	Compounds	)	
TC/A.U. :	1616	)	
Examiner :	Qazi, Sabiha Naim	)	

INFORMATION DISCLOSURE STATEMENT

Mail Stop: Divisional Application  
Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

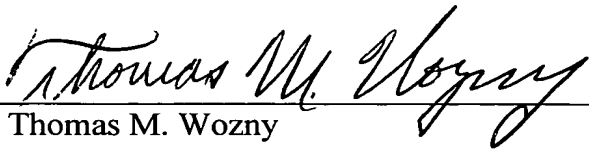
Sir:

The references listed on the enclosed PTO Form 1449 are being submitted in the above-identified patent application in accordance with 37 CFR 1.97(b)(1).

A copy of each of the listed references is enclosed in compliance with the rules.

Respectfully submitted,

ANDRUS, SCEALES, STARKE & SAWALL, LLP

By   
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Substitute for form 1449/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 4

**Complete if Known**

Application Number	
Filing Date	February 17, 2004
First Named Inventor	Hector F. DeLuca
Art Unit	1616
Examiner Name	Qazi, Sabiha Naim
Attorney Docket Number	1256-00947

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
		US- 6,392,071	05-21-2002	DeLuca et al	
		US- 5,945,410	08-31-1999	DeLuca et al	
		US- 5,936,133	08-10-1999	DeLuca et al	
		US- 5,877,168	03-02-1999	Miyamoto et al	
		US- 5,849,726	12-15-1988	Brenner	
		US- 5,846,960	12-08-1998	Labrie	
		US- 5,843,928	12-01-1998	DeLuca et al	
		US- 5,843,927	12-01-1998	DeLuca	
		US- 5,817,648	10-06-1998	Kutner et al	
		US- 5,587,497	12-24-1996	DeLuca et al	
		US- 5,536,713	07-16-1996	DeLuca et al	
		US- 5,246,925	09-21-1993	DeLuca et al	
		US- 5,237,110	08-17-1993	DeLuca et al	
		US- 5,086,191	02-04-1992	DeLuca et al	
		US- 4,666,634	05-19-1987	Miyamoto et al	
		US-			
		US-			
		US-			
		US-			

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
		0184206	12-04-1985	Europe		
		0078704	04-29-1987	Europe		
		0387077	09-03-1990	Europe		
		0474517	11-03-1992	Europe		
		0480572	04-15-1992	Europe		
		0516410	12-02-1992	Europe		

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Sheet	2	of	4
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Application Number	
Filing Date	February 17, 2004
First Named Inventor	Hector F. DeLuca
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Examiner Name	Qazi, Sabiha Naim
Attorney Docket Number	1256-00947

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		Country Code <sup>3</sup> *Number <sup>4</sup> *Kind Code <sup>5</sup> (if known)				
		WO90/09991	09-07-1990	Calverley et al		
		WO96/01811	01-25-1996	Posner		

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				Application Number	
				Filing Date	
				First Named Inventor	
				Art Unit	
				Examiner Name	
Sheet	3	of	4	Attorney Docket Number	
				1256-00947	

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		Baggiolini et al, "Stereochemical Total Synthesis of 1a,25-Dihydroxycholecalciferol and 1Beta,25-Dihydroxyerocalciferol", Journal of Organic Chemistry, 51, pp. 3098-3108, 1986.	
		Bouillon et al, "Biological Activity of Dihydroxylated 19-Nor-(Pre)Vitamin D3", Bioactivity of 19-Nor-Pre D, Vol. 8, No. 8, pp. 1009-1015, 1993.	
		Chemical Abstracts, "Chemistry of Synthetic High Polymers", Vol. 110, No. 10, Abstract 110: 82505v, March 6, 1989.	
		Chemical Abstracts, XP-002066055, Vol. 121, No. 21, November 21, 1994.	
		Fujishima et al, "Synthesis and Biological Activity of 2-Methyl-20-EPI Analogues of 1Alpha,25-Dihydroxyvitamin D3," Bioorganic & Medicinal Chemistry Letters, 8, pp. 2145-2148, 1998.	
		Kiegiel et al, "Chemical Conversion of Vitamin D3 to its 1,25-Dihydroxy Metabolite", Tetrahedron Letters, Vol. 31, No. 43, pp. 6057-60660, 1991.	
		Konno et al, "A Novel and Practical Route to A-Ring Enyne Synthon for 1Alpha,25-Dihydroxyvitamin D3 Analogs: Synthesis of A-ring Diastereomers of 1Alpha,25-Dihydroxy-Vitamin D3 and 2-Methyl-1,25-Dihydroxyvitamin D3," Bioorganic & Medicinal Chemistry Letters, 8, pp. 151-156, 1998.	
		Okano et al, "Regulatory Activities of 2b-(3-Hydroxypropoxy)-1a,25-Dihydroxyvitamin D3. A Novel Synthetic Vitamin D3 Derivative on Calcium Metabolism", Biochemical and Biophysical Research Communications, Vol. 163, No. 3, pp. 1444-1449, September 29, 1989.	
		Perlman et al, "1a,25-Dihydroxy-19-Nor-Vitamin D3. A Novel Vitamin D-Related Compound with Potential Therapeutic Activity", Tetrahedron Letters, Vol. 31, No. 13, pp. 1823-1824, February 1990.	
		Posner et al, "2-Fluoroalkyl A-Ring Analogs of 1,25-Dihydroxyvitamin D3-Stereocontrolled Total Synthesis via Intramolecular and Intermolecular Diels-Alder Cycloadditions. Preliminary Biological Testing", Journal of Organic Chemistry, 60, pp. 4617-4628, 1995.	

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Sheet	4	of	4	Attorney Docket Number	1256-00947

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		Posner et al, "Stereocontrolled Synthesis of a Trihydroxylated A Ring as an Immediate Precursor to 1Alpha,2Alpha,25-Trihydroxyvitamin D3", Journal of Organic Chemistry, 56, pp. 4339-4341, April 15, 1995.	
		Sarandeses et al, "Synthesis of 1Alpha,25-Dihydroxy-19-Norprevitamin D3", tetrahedron Letters, pp. 5445-5448, April 1992.	
		Sicinski et al, "New 1Alpha,25-Dihydroxy-19-Norvitamin D3 Compounds of High Biological Activity: Synthesis and Biological Evaluation of 2-Hydroxymethyl, 2-Methyl, and 2-Methylene Analogues," Journal of Medical Chemistry, 41, pp. 4662-4674, 1998.	
		Slatopolsky et al, "A New Analog of Calcitriol, 19-Nor-1,25-(OH)2 D2 Suppresses Parathyroid Hormone Secretion in Uremic Rats in the Absence of Hypercalcemia", American Journal of Kidney Disorders, 26(5), 832-60, 1995.	
		Suhara et al, "Synthesis and Biological Evaluation of Novel 2Alpha-Substituted 1Alpha,25-Dihydroxyvitamin D3 Analogues," Biologianic & Medicinal Chemistry Letters, 10, pp. 1129-1132, March 16, 2000.	

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